

XVIII.—Notes on the Nidification of some Indian Falconidæ.

II. *The Genus Accipiter.* By E. C. STUART BAKER,
M.B.O.U.

(Plate VII.)

INDIA is extraordinarily rich in Sparrow-Hawks, having at least four species besides sub-species, some of the latter having been given the rank of species by Indian field-naturalists and ornithologists.

The following are found within the limits of Burmah, Ceylon, and India, either as residents or as migrants :—

* <i>Accipiter nisus nisus.</i>	Migrant.
<i>A. n. melanoschistos.</i>	Resident.
<i>A. virgatus virgatus.</i>	Resident.
<i>A. v. confusus.</i>	Resident.
<i>A. affinis.</i>	Resident.
<i>A. gularis.</i>	Migrant.

Whether the Ceylonese form of *A. virgatus* can be separated from the South Indian one is very doubtful, and, again, it is equally doubtful whether either or both can be distinguished from the true *A. v. virgatus* from Java; if they can, they would bear the name *A. v. bezra* of Jerdon. For the time being, therefore, I keep all three of these forms under the same name.

Accipiter nisus nisus.

The Common Sparrow-Hawk.

This bird does not breed in any portion of India, the numerous accounts of its nests and eggs all referring either to *A. n. melanoschistos* or one of the other forms of Sparrow-Hawk.

At the same time, in the cold weather its distribution is very wide, and it may be found practically anywhere within the limits dealt with in this article. Harington obtained a

* This form, found in Central Asia, is sometimes divided from the typical European bird under the name *A. n. nisosimilis*.

rather pale specimen of true *A. n. nisus* as far east as Bhamo, the skin being duly identified by Hartert, and the specimen itself is now in the Tring Museum; to the south it has been taken certainly as far as the Neilgherries.

Accipiter nisus melanoschistos.

The Eastern Sparrow-Hawk.

I have never personally taken the nest or eggs of this Hawk, nor do I think it ever works its way south of the Brahmapootra River, though I found it not uncommon in the hills on the northern bank. Its best-known haunts within Indian limits are the North-West Himalayas from Baluchistan to Nepal. It extends, however, through Sikkim, Bhutan, the Mishmi and Abor Hills into the Shan States and Chin Hills, and indeed as far as Formosa (*Hartert*).

Harington found it in Bhamo in April, so it was evidently nesting there, and probably it breeds wherever found, though it may straggle beyond its usual limits in the cold weather.

It is known to nest up to at least 8000 or 9000 feet in the Punjab Himalayas, but it probably will be found to breed far higher even than this. I have had eggs sent me from Gyantse in Tibet, taken at over 12,000 feet, which were undoubtedly those of a Sparrow-Hawk of some kind, but unfortunately no skin was sent with the eggs, so that it is impossible to say to which form the eggs should be attributed.

In the Punjab and United Provinces, and in the North-West Frontier Province it breeds freely at heights over 4000 feet, but there is little on record about it, as, for the most part, our field-naturalists have not discriminated between the western and eastern forms of Sparrow-Hawk.

Whitehead (*Bombay Nat. Hist. Journal*, xxi. p. 306) quoting Donald, says:—

“This species breeds freely in Tirah, which lies just north of our limits, and every autumn some thirty or forty individuals are caught along the Kachai stream by drop-nets set

up in the open, with a cage of fine net-web containing sparrows suspended in front. The Hawk, seeing the sparrows flutter up, makes a dash, and gets entangled in the mesh. The bazaar rate for a Sparrow-Hawk varies from R 2. to R 10."

Mr. P. Dodsworth and, I think, Mr. A. E. Jones have both taken its nest round about Simla; Ward on several occasions found it breeding in Kashmir; Buchanan, Rattray, Wilson, and others took its eggs in the Murree Galis, Kashmir, and Mussouri, and they have also been taken to my knowledge in Nepal and Sikkin.

Like its nearest relation, the English Sparrow-Hawk, this little Hawk nearly always, if not invariably, uses the deserted nest of another bird in which to lay its eggs. Sometimes, beyond adding a few leaves or pliant twigs as a new lining, nothing is done in the way of repairs; at other times a good deal of trouble is taken to add to and improve the borrowed structure, which loses all likeness to its original self, so much so that it may be quite impossible to guess to what bird it first belonged.

I have eggs in my own collection from Simla, Baluchistan, and other places, and, as a series, they cannot be in any way distinguished from similar series of eggs of the Common Sparrow-Hawk. On the whole, however, they are not so richly coloured, though each individual clutch can be easily matched with many of that bird.

The greatest extremes in length are 36.0 and 42.0 mm. and in breadth 30.8 and 33.4 mm., the average of 40 eggs being 40.3 × 32.4 mm.

I have seen no clutch of more than four eggs, and several of three eggs well advanced in incubation, but it is very probable that five may be sometimes laid.

It is said to desert its nest in most cases on very little provocation, yet occasionally it has been known to return to its nest and lay again after the first clutch has been taken.

It is a game little bird, and feeds, I think, even more exclusively on small birds than does the European Sparrow-Hawk. Undoubtedly over the greater part of its range in



Figs. 1-6. ACCIPITER AFFINIS.
Figs. 7-9. ACCIPITER V. VIRGATUS.

India it feeds principally on sparrows, but it will tackle quail, doves, babblers of various kinds, some of the larger laughing-thrushes and birds of like size, and has been known to attempt even the life of a green pigeon.

Accipiter affinis. (Pl. VII. figs. 1-6.)

The Himalayan Sparrow-Hawk.

This little Sparrow-Hawk breeds freely throughout the Sub-Himalayan region, but is rare in the western portion of its range, being more frequently met with in eastern Nepal and Sikkim; it is comparatively common in the hill-ranges of Assam, Chittagong, and in the Chin Hills, extending certainly as a resident into the Shan States and probably into Siam and the Malay Peninsula, whilst in the winter it wanders as far east as Hainan and Formosa. To the west I have no record of its breeding any further than Murree, where its eggs and nest were taken by the late Mr. Philip Mackinnon, and it is evidently rare there where it overlaps the range of *Accipiter nisus melanoschistos*.

In Assam and Eastern Bengal I found it during the breeding season generally frequenting hills between 2000 and 3000 feet, but it comes right down into the broken ground at the foot of the hills, and also ascends them to a height of at least 6000 feet, whilst in the non-breeding season it may be found well into the plains far from any hills.

All nests taken by myself have been found either in evergreen forest or in deciduous forest much mixed with evergreen trees and thick undergrowth. My first nest was taken in May, 1889, and was placed in a high tree on a rocky hillside overlooking the Laisung stream in North Cachar. The forest in which it stood was very dense evergreen, rendered even more dense and impenetrable by the great quantity of creepers and orchids, which, as usual at this elevation, some 4000 feet, ran from tree to tree and rock to rock. My camp, a collection of small grass huts, had been built in an opening cleared for the purpose in this forest, and for two

or three mornings the presence of the Sparrow-Hawks had been made known to us by their loud harsh cries, and by an occasional glimpse of the birds themselves as they dashed across the open from one side to the other. It was not, however, until the third morning that we located their nesting-tree, but once we had found this, we had little difficulty in making out a black blot high up in the upper, inner branches as their nest.

Climbing to it was an easy task, for stout vines of the elephant-creeper grew right up to and past the nest, forming almost a ladder the whole way. Within a very few moments, therefore, I reached the nest, and on my arrival at that point was delighted to find five beautiful eggs, which proved to be more richly coloured than any ever taken since. The nest was so high up, at least sixty feet, that climbing down from it with the eggs to carry in one hand was harder than getting up; however, eventually the descent was accomplished and the eggs carried into safety. They were hard-set, but with a little care and patience made good specimens, although this was before the days when the use of caustic potash had become universal as an aid to cleaning incubated eggs.

Whilst we were taking these eggs, the birds behaved in the manner since proved to be habitual with them on such occasions, and much as does the Common English Sparrow-Hawk under similar circumstances. They both indulged in many expostulations and harsh cries as we clambered up the tree, fluttering about in a great state of excitement on trees some distance away, but beyond that did nothing to defend their eggs, and before we had actually got up to the nest, both parents had flown off, though we could still hear them calling in the distance.

The nest used was an old one of *Corvus macrorhynchus*, the Jungle Crow, and, judging from subsequent experience, the nests of these birds seem to be the favourite ones for these little Hawks to lay their eggs in. In both North Cachar and the adjoining hill-ranges this Crow builds extraordinarily neat nests, using moss almost entirely for the

outer parts and a good lining of roots and fern-stalks for the inside. The nests form very stout, warmly-built cups, with a deep, well-shaped receptacle for the eggs, and are far superior in finish to the nests of these same Crows elsewhere. So far as could be seen, all the Sparrow-Hawks ever did to the nests when adopting them for their own use, was to add a few green leaves to the lining; further repairs were generally unnecessary, the nests having been so well and compactly built in the first instance.

This, my first nest, was obtained in the highest part of the bird's breeding-range, but my next one was found at the lowest elevation of its breeding haunts, and formed in every way also a contrast to it. It was taken in a patch of deciduous forest, dividing two strips of mustard cultivation on the banks of the Kopili stream, and the elevation could not have been over 300 feet above sea-level. The trees at the time we discovered the nest were still very bare, and high up in one of them, conspicuous for a great distance in every direction, was an old nest of a Brahminy Kite (*Haliastur indus*). I had passed this nest several times on previous days, but it was so obviously old and battered, that I had not troubled to examine it until my attention was attracted to it by seeing a Sparrow-Hawk settle on the tree, and finally seat herself on the nest. A closer inspection then showed that the Hawks had repaired the inside of the nest quite neatly and had added a lining of small twigs and leaves, in which reposed four slightly incubated eggs.

Dr. H. N. Coltart took several clutches of this little Hawk's eggs in Margherita, Assam, but, so far as I know, all these were taken in the broken hilly ground north and east of Margherita and none in the actual plains, where, however, the bird was common enough in the cold weather. A clutch of five was found by him on two occasions, but here, as elsewhere, the normal full clutch consisted of either four or three eggs.

Two nests which were taken whilst I happened to be staying with Dr. Coltart were both stick nests of some kind, and looked to me more like those of the Imperial Pigeon than

those of any other bird with which I am acquainted; they were comparatively massive and well-lined with small twigs, leaves, and scraps of dead moss, in addition to which some of the twigs used were themselves well-covered with lichen and moss. Presumably, therefore, the birds had merely adopted the Pigeon's nests as a basis for their own, and had then added to them further material until the whole was massive enough to suit their tastes.

The nest taken by Mr. Mackinnon at Murree was found at over 6000 feet, and is the highest elevation of any recorded nest of this Sparrow-Hawk. It has, however, been found in the Naga Hills at greater heights than this, and certainly breeds there up to 7000 feet, if not higher. A pair were breeding in some forest above Henema when I visited this place in April, 1887, though I was unable to find the nest. Both birds were very excited, and continued calling to each other whilst I was there, but there were no roads, rivers, or open places in the vicinity in which we could have made a special search, and the undergrowth elsewhere was so densely matted that, once we left the so-called bridle-path which ran from one village to another, it was almost impossible to move.

Other nests occupied by these birds, and from which I have taken eggs, have been those of a Thrush of some kind, probably *Cochoa*, built in a tangle of creepers on a big tree, and of a Green Imperial Pigeon (*Carpophaga ænea*) in a peul-tree (*Ficus religiosa*).

I also once found it breeding on the top of an old broken tree-stump, about forty feet from the ground, in a nest of twigs, roots, and grass, but whether this nest had been built by the Hawks themselves or not it was impossible to say. With this possible exception, there is nothing at present to show that this Sparrow-Hawk ever builds its own nest, but it is difficult to say to what kind of bird the nest could have belonged if not built by the Hawks. It was very roughly built and most flimsy, both in appearance and to handle.

Over the greater part of its breeding-range the Himalayan Sparrow-Hawk lays principally in the latter half of April and the first half of May, but in the lower elevations many birds lay in early April, and I have taken a hard-set clutch of three eggs on the 1st of that month. On the other hand, above 3500 feet they sometimes do not commence to lay until the beginning of June or end of May.

They desert their nests very readily, and I have known birds leave eggs which had not been touched, even when they showed traces of incubation. At the same time I have known birds stay on after the first egg had been laid, taken out of the nest and examined, and the second and third also looked at, before the final one was laid and the whole clutch taken.

They lay on alternate days as a rule, but very often two days may elapse between the laying of the first and second eggs, and two or even three between the subsequent layings. Four eggs is perhaps the number most often laid, but very often there are only three, and five in a clutch is a rare occurrence.

In appearance the eggs are quite typical Sparrow-Hawk's eggs, but on an average are much more weakly coloured and marked than are those of our English bird. The most handsome egg I have seen (Pl. VII. fig. 6) would be considered but a poor specimen when compared with really boldly-marked clutches of *A. nisus nisus*, and the majority are but feebly marked with more or less washed-out blotches, smudgy patches, and spots varying from light sienna-brown to a rather rich vandyke-brown or dark umber. The subsidiary markings are generally rather more numerous than the primary or superficial markings, and average somewhat bigger, but in some specimens the proportions are reversed, and the subsidiary markings are almost absent. Some eggs are to all intents and purposes pure white, the few faint smudges of colour hardly showing except in a bright light, and I have seen one or two absolutely unmarked.

The coloration of the individual eggs in the same clutch is often very unequal, one or two eggs being much more freely marked than the others, or three out of four may be well-marked and the fourth almost immaculate. So, too, the character of the markings varies greatly both in clutches and in individuals of the same clutch. As a rule, they consist of large blotches and smears of colour scattered very irregularly over the whole egg, and more numerous on the larger than the smaller end; sometimes, however, they are confined to the larger end, where they may be more or less confluent; in others, again, they may be confined to wide zones round the egg. Sometimes they are very large, and consist of two or three marks only, whilst rarely they are reduced to tiny specks and blotches, and are numerous everywhere. The ground-colour is a white, almost always, when first laid, with a faint skimmed-milk tinge of bluish, but as incubation progresses this tinge disappears, and the eggs often become stained and discoloured with reddish. Occasionally a fresh egg may be taken with a pinkish-white ground-colour, but I have seen very few such eggs.

In shape and texture they closely resemble the eggs of the European Sparrow-Hawk.

The longest and broadest eggs measure respectively 40·4 and 32·2 mm., and the shortest and most narrow 35·0 and 28·8 mm. The average of 50 eggs is 37·7 × 30·0 mm.

The Himalayan Sparrow-Hawk is, I think, more of an insect-eater than its English relation, and during the time the termites are on the wing, these form a very considerable portion of its diet. At the same time, it kills large numbers of small birds, mice and other small rodents, bats, and the smaller lizards and reptiles. I have seen the remains of the small grey flying-squirrel in one of their nests, and many remnants of comparatively large birds, such as barbets, thrushes and bulbuls. It is a most inveterate hunter after nests with the object of stealing the young, and I am sure many thousands of nestlings meet with an untimely end through this agency. Although it is such a thief, it is

also capable of great speed and activity, and I have seen it actually hunt and capture the little Palm-roof Swift (*Tachornis infumatus*). On the occasion in question, these small Swifts were busy hawking up and down the Diyung stream: the heat of the day was past, and the insects of which they were in pursuit were flying high over the tops of the trees which forested the river on either side. For some time they continued thus to hunt undisturbed, but after a short time I saw a Sparrow-Hawk rush *upwards* into the air from the top of a tall tree and strike at a passing Swift. He failed, however, in his effort, and at once, without attempting any pursuit, returned to his perch. In a few minutes a second attempt was made with no better result, but a third attempt was more successful, and the fluttering, dodging little bird was seized and carried off into the tree to be devoured at leisure. About twenty minutes after this the Sparrow-Hawk was again on the watch for prey, and this time attempted far higher game. A few Spine-tails (*Chætura nudipes*) had joined the little Swifts, and as one of them dashed past overhead the Sparrow-Hawk rose at him, but by the time he had arrived at the place where he *thought* the Spine-tail should have been, this bird must have been at least two hundred yards away down the river. This was quite sufficient lesson for the Hawk, who made no more attempts to strike the bigger Swifts, but before I left the place to get back to my camp, he had caught a second Palm-roof Swift and disposed of it.

I have never seen two pairs of these Sparrow-Hawks breeding close to one another, and they probably keep very jealously to their own areas for hunting purposes. They return year after year to the same strip of forest to breed, although they may not use the same nest or the same tree, but once the breeding season is past, they range over a very much wider extent of country and may be met with a considerable distance from their own particular breeding haunts.

Accipiter virgatus virgatus. (Pl. VII. figs. 7-9.)

The Bezra Sparrow-Hawk.

The Southern Indian form of Sparrow-Hawk breeds in all the hill-ranges of that part of the continent, but appears to be more particularly common in the hill-tracts of Travancore between 2000 and 4000 feet, nesting in the immense forests of deciduous trees which are there found.

The only field-naturalist, however, who has had any success with these birds is Mr. J. Stewart, who has a marvellous collection of South Indian Raptores, including a wonderful series of the eggs of this Sparrow-Hawk.

According to Mr. Stewart, the Bezra breeds principally in the deserted nests of other birds, repairing them to suit its own taste, and lining them with green leaves and supple twigs. Sometimes, however, it would appear to build a new nest entirely for itself; but, owing to the way it repairs and builds on to old nests, it is often difficult to say whether or not it has made use of another bird's work.

They lay from the middle of January up to the end of April, but principally in January and February.

As with so many other southern forms of birds which have closely allied subspecies in the north, the Bezra Sparrow-Hawk lays fewer eggs than its representatives in the Himalayas. Three seems to be the normal clutch, both four and two being sometimes found*.

In general appearance the eggs are like very clean, lightly, but brightly-marked specimens of the Common Sparrow-Hawk's eggs. I have seen no really heavily-marked eggs, but, on the other hand, nearly white or very faintly-marked eggs are comparatively common.

They vary in length between 34.4 and 38.6 mm., and in breadth between 27.8 and 31.4 mm., the average of 20 eggs being 36.8 × 29.7 mm.

* In a letter just received from Mr. Stewart he informs me that he has this year taken a nest of this Sparrow-Hawk containing five eggs. Of these, however, two were abnormally small.

Accipiter virgatus confusus.

The Luzon Sparrow-Hawk.

The only record I can find of the breeding of this Sparrow-Hawk within Indian limits is Wickham's account of two nests taken by him in the Andamans (Bombay Nat. Hist. Journal, xix. p. 992).

He here writes:—

“House-crows not having been sentenced to transportation, an untidy collection of sticks in the fork of a rain-tree, although overhanging a road to a small village, attracted my attention early in March this year; it contained nothing, but was noted for future inspection. On the 21st March I visited the spot again and found it contained two fresh eggs of the Bezra Sparrow-Hawk; thinking this was probably the full complement for the Andamans, as birds who should know better often play this trick on collectors here, I took them, but secured another egg in the nest on the 28th, my first bit of good fortune.

“The jungle round here was a favourite hunting-ground of mine, and I had placed nesting-boxes for the Andaman Shama in it. I had also noticed another stick-nest in a rain-tree not one hundred yards from the nest I had taken the Sparrow-Hawk's eggs from, and it was during one of my subsequent visits that I found my little pair of Hawks were repairing this old home of theirs, from which I subsequently (28th April) took four eggs slightly incubated.

“The pluck of these little Hawks in defence of their nests is wonderful as they swoop down on the marauder, and once one struck my topee as I was watching the man at the nest, both male and female taking part in the attack; but they also have patience, as this pair returned to their first nest and hatched out their brood on the 14th June.”

Two eggs of the second clutch referred to above by Mr. Wickham are now in my collection. Of these, one is comparatively well-marked with large and fairly bold blotches of reddish vandyke-brown, sparsely and irregularly scattered over the whole of the egg, others underlying these